restaurants; in the morning crowds of health seekers stroll about the park, sucking the chalybeate water through bent glass tubes. The hills around reach no great altitude, but are very picturesque and command a fine panorama, although Elbruz is usually only visible in the early morning. On the grassy slopes of these hills I found *Forficula auricularia* abundant under stones; *Stauroderus apricarius*, L., is the common grasshopper, but larvæ were still numerous on July 20th; its habits recall those of *Omocestus viridulus*, L., while its voice resembles that of *St. bicolor*. A grey *Platycleis* was not yet mature, and a young *Olynthoscelis* occurred sporadically. The thistle beds and clumps of shrubs sheltered *Locusta caudata*, Charp. I was interested to note that his stridulation is much deeper than that of *L. viridissima*, and the song less sustained.

On the top of the plateau I found a *Decticus verrucivorus*, L., just emerging from the nymphal skin; the only stridulations audible here recalled that of *Ephippigera*, with a similar peculiar timbre; I traced it down to a glaucous blue Phaneropterid, probably *Isophya amplipennis*, that sat and buzzed on the low herbage; he sits and chirps boldly on the bluish leaves, his long hind legs stretched out conspicuously. The chirp of *Gryllus campestris* resounded in the lower ground, and I took a single *Gryllus burdigalensis*.

In butterflies I noticed *Papilio machaon*, *Epinephele jurtina* (*janira*) and *Colias hyale*. I should add that my identification of Lepidoptera is amateurish in the extreme, and very untrustworthy, being only a reminiscence of boyhood days.

My collecting was now done; it had been snatched at intervals in a busy time; I had still to return to Tiflis, Kutais and Guria, over the Georgian road, and back again, but had no more opportunity of collecting. Retracing the ground gave opportunities of confirming many interesting ornithological, philological, ethnological and geological observations, but that is another story.

Descriptions of a Pterergate and two Gynandromorphs of Myrmica scabrinodis, Nyl., with a list of all the known cases of the latter.

By H. DONISTHORPE, F.Z.S., F.E.S.

On July 30th last, when hunting for colonies of *Myrmica scabrinodis*, at Weybridge (to be used for the experiments being carried on in connection with *Lycaena arion*), I was fortunate enough to discover the above mentioned forms. In one colony, the nest of which was situated partly in the ground and partly under the bark of a fir stump, I found the pterergate. It struck me as being curious as soon as I saw it, and on bottling it I at once perceived what it was.

Description.

Head, shape of ♀, blackish.

Thorax pale yellow with some black marks as follows:—Pronotum slightly blackish; mesonotum with two round deep black spots; scutellum present, small but distinct, blackish.

Two small forewings are present, which possess traces of veins at the base only, the one on the right measures 2mm. in length, that on the left ·7mm. only.

The hindwings are represented by two very small projecting tubercles, which are longer than broad, and are composed of the substance of wings, not being chitinous. Legs pale yellow.

Epinotum pale yellow, spines long and straight; gaster brownish-yellow. Long 5·2mm.

The colony contained two queens, some males and brood. No further pterergates were produced, and only males hatched from the sex pupæ present.

As far as I am aware this is only the second pterergate which has been taken in Britain. The other, which was taken by Keys, near Plymouth, is described in my book (*British Ants*, p. 131).

The colony which contained the two gynandromorphs was nesting in the ground, a small hole in the turf forming the entrance. It contained one queen, some normal males, sex pupæ, and small larvæ. This colony has been kept under observation ever since it was dug up all the pupæ hatched and produced only normal males. The two gynandromorphs were noticed at once and bottled in the field.

DESCRIPTIONS.

No. 1. Mixed Gynandromorph.

Head ♀ shape; clypeus anteriorly, mandibles, antennæ, cheeks, right temple, a thin streak on left temple, frontal carinæ, and a patch on left side of front red, rest of head blackish. Left eye a little larger than right eye; ocelli a little larger and more prominent than in a normal ♀; antennæ 12-jointed, with 3-jointed clubs, but with shorter and stouter scapes than in normal ♀, left scape more the shape of ♂, and without the tooth at the bend, right scape with tooth.

Thorax: pronotum red with dark patches anteriorly, in centre, and on left side posteriorly; mesonotum with distinct Mayrian furrows, the right side and the space between the furrows black, the left side red, and the right parapsis red. The space between the Mayrian furrows is channelled in centre, which is not the case in either normal ♂ or ♀, the rest being slightly striate; scutellum and praescutellum black on right side; metanotum black. Epinotum ♀, but black at base and between the spines, right spine shorter than left; petiole small, deformed, black at base and left corner, fixed to right half of post-petiole; post-petiole larger on left side with a dark longitudinal mark in centre, right side blackish at base; gaster more ♀ shape and bristles, dirty blackish-yellow with ill-defined darker patches and round yellow spots, with five visible segments and ordinary ♂ genitalia.

Wings intermediate between ♂ and ♀. Legs intermediate between ♂ and ♀, partly black, partly yellow. Long. 5·7mm.

No. 2. Mixed Gynandromorph.

Head shape of ♀; right mandible at base, clypeus in centre and on left, frontal area, front, temples, and occiput, with the exception of certain round spots, black, rest of head yellow. Antennæ ♀, 12-jointed, with 3-jointed clubs, but right scape more shape of ♂, and black above.

Thorax: pronotum yellow with two black patches posteriorly; mesonotum with part of Mayrian furrow present on right side, and a black patch, the shape of of the space between the Mayrian furrows if both were present, in centre; a broad black patch occurs on the right parapsidal furrow and a narrow one on the left; scutellum black with the exception of a red patch on right anterior portion. Epinotum black, with the exception of the outer portion of the left spine, a thin streak on right spine and the right half of the space between the spines, which are yellow. The right spine is longer than the left. Petiole black with the exception of a yellow circular patch on left anterior corner and another on right posterior corner; post-petiole, left half yellow, right half black. Wings intermediate between ♂ and ♀. Legs intermediate, partly black, partly yellow.

Gaster blackish, with indistinct yellow patches, with four visible segments above, and ♂ genitalia considerably excerted at apex. Long. 6·3mm. (including ♂ genitalia 6·8mm.).

In 1903, Wheeler [Bull. Amer. Mus. N.H., **19**, 653-683 (1903)] described and recorded all the known cases of gynandromorphic ants. These are:—

1. *Formica sanguinea*, Latr. (Tischbein, 1851).

2. *Tetramorium similliimum*, Smith (Roger, 1859).
3. *Tetramorium similliimum*, Smith (Meinert, 1860).
4. *Myrmica lobicornis*, Nyl. (Meinert, 1860).
5. *Myrmica ruginodis*, Nyl. (Forel, 1874).
6. *Formica exsecta*, Nyl. (Forel, 1874).
7. *Formica rufibarbis*, F. (Forel, 1874).
8. *Formica truncicola*, Nyl. (Forel, 1874).
9. *Polyergus rufescens*, Latr. (Forel, 1874).
10. *Polyergus rufescens*, Latr. (Forel, 1874).
*11. *Myrmica laevinodis*, Nyl. (F. Smith, 1874).
12. *Leptothorax tuberum*, F. (Adlerz, 1886).
13. *Myrmica scabrinodis*, Nyl. (Wasmann, 1890).
14. *Myrmica scabrinodis*, Nyl. (Wasmann, 1890).
*15. *Stenamma westwoodi*, West. (Perkins, 1891).
16. *Azteca instabilis*, F. Smith (Forel, 1892).
17. *Camponotus ligniperdus*, Ltr. (Klapálek, 1896).
18. *Formica microgyna*, Wheeler (Wheeler, 1903).
19. *Polyergus rufescens*, Ltr., sub sp. *lucidus*, Mayr (Wheeler 1903).
20. *Stenamma* (*Aphaenogaster*) *fulvum*, Roger, sub sp. *aquia*, Buckley, var. *piceum*, Emery (Wheeler, 1903).
21. *Stenamma* (*Aphaenogaster*) *fulvum*, Roger, sub sp. *aquia*, Buckley, var. *piceum* (Wheeler, 1903).
22. *Leptothorax obturator*, Wheeler (Wheeler, 1903).
23. *Epipheidole inquilina*, Wheeler (Wheeler, 1903).

In 1914, Wheeler [(Amer. Nat., **48**, 49-56 (1914)] enumerated and described the gynandromorphous ants described during the decade 1903-1913, *viz.* :—

24. *Cardiocondyla batesi*, For., var. *nigra*, For. (Santschi, 1903).
25. *Anergates atratulus*, Schenck (Adlerz, 1908).
26. *Anergates atratulus*, Schenck (Adlerz, 1908).
*27. *Formica sanguinea*, Ltr. (Donisthorpe, 1909).
*28. *Formica sanguinea*, Ltr· (Donisthorpe, 1909).
29. *Solenopsis fugax*, Ltr. (Santschi, 1910).
*30. *Myrmica scabrinodis*, Nyl. (Donisthorpe, 1913).

In 1914 [*Ent. Rec.*, **26**, 136 (1914)] I described another gynandromorph :—

31. *Monomorium floricola*, Jerd. (Donisthorpe, 1914).

And in my book [*British Ants*, 323 (1915)] yet another.

*32. *Formica rufibarbis*, F. (Donisthorpe, 1915).

The two specimens described in the above note bring the total up to 34:—

*33. *Myrmica scabrinodis*, Nyl. (Donisthorpe, 1915).
*34. *Myrmica scabrinodis*, Nyl. (Donisthorpe, 1915).

Those specimens marked with an asterisk are British. Of the 34 above recorded cases, the writer has described seven and eight are British.

NOTES ON COLLECTING, Etc.

AGRIUS CONVOLVULI AT CHICHESTER.—A few *Agrius* (*Sphinx*) *convolvuli* have been noticed here during September and early in October. Some of the insects were of remarkably small size and of worn appearance.—JOSEPH ANDERSON, Chichester.